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U.S. PATENT AND TRADEMARK OFFICE

Sheet 1 of 1

FORM PTO 1449  
(REV 2-32)

**U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE**

File No.  
144213

Serial No.  
10/707,993

**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use several sheets if necessary)

Applicant(s):  
Burrell et al.

Filing Date:  
01/30/2004

Group:  
3762

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
MBS	1 5,391,199	02/21/1995	Ben-Haim	607	122	07/20/1993
	2 5,738,093	*4/14/1998	Ben-Haim	128	653.1	02/01/1996
	3 6,289,115 B1	09/11/2001	Takeo	382	130	02/12/1999
	4 6,289,239 B1	09/11/2001	Panescu et al.	600	523	03/29/2000
	5 6,389,104 B1	05/14/2002	Bani-Hashemi et al.	378	98.12	06/30/2000
	6 6,468,265 B1	10/22/2002	Evans et al.	606	1	11/09/1999
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EXAMINE R INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
MBS	3 2003/0097219 A1	05/22/2003	O'Donnell et al.	702	19	10/12/2001
	4 2003/0187358 A1	10/02/2003	Okerlund et al.	600	443	03/15/2002
	10 2003/0220557 A1	11/27/2003	Cleary et al.	600	409	02/28/2003
	5 2004/0087850 A1	05/06/2004	Okerlund et al.	600	407	11/01/2002
	6 2004/0225328 A1	11/11/2004	Okerlund et al.	607	9	05/09/2003
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MBS	8 2004/0225331 A1	11/11/2004	Okerlund et al.	607	14	05/09/2003

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION Y / N
MBS	15 EP 1182619 A2	27.02.2002	European Union			Y
	16 EP 1321101 A2	18.12.2002	European Union			Y
MBS	17 WO 91/07726	30.05.1991	WO			Y
	18 WO 96/10949	18.04.1996	WO			Y

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MBS	19	PCT Search Report for PCT/US2004/020909
		F. H.M. Wittkampf et al.; "Loca Lisa - New Technique for Real-Time 3-Dimensional Localization of Regular Intracardiac Electrodes;" <i>Circulation</i> ; 1999; 99: 1312-1317.
MBS	21	"Advanced Vessel Analysis" product description, [online] <a href="http://www.gehealthcare.com/usen/cl/clin_app/products/aswessel.html">http://www.gehealthcare.com/usen/cl/clin_app/products/aswessel.html</a> [retrieved 12/01/2004]
		"CardilQ" product description, [online], <a href="http://egems.gehealthcare.com/geCommunity/Europe/flex_trial/awFlexTrial/aw3_1/eflextrial">http://egems.gehealthcare.com/geCommunity/Europe/flex_trial/awFlexTrial/aw3_1/eflextrial</a> [retrieved 12/01/2004]

Examiner *Mark Burrell*

Date considered

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Not for submission under 37 CFR 1.99)</i>	Application Number		10707993
	Filing Date		2004-01-30
	First Named Inventor	Marc Anthony Burrell	
	Art Unit	3766	
	Examiner Name	Bockelman, Mark	
	Attorney Docket Number	144213/GEM-0099	

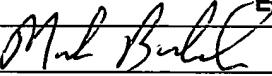
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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
MB	1	5515849		1996-05-14	Murashita et al.			
MB	2	6058218		2000-05-02	Cline			
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MB	1	20030120264	A1	2003-06-26	Lattouf			
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	Examiner Name	Bockelman, Mark
	Attorney Docket Number	144213/GEM-0099

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
MB	1	GENEVIEVE DERUMEAUX et al., Doppler Tissue Imaging Quantitates Regional Wall Motion During Myocardial Ischemia and Reperfusion, Circulation Journal of the American Heart Association, Circulation 1998; 97; 1970-1977	<input type="checkbox"/>
	2	OLIVIER GERARD et al., Efficient Model-Based Quantification of Left Ventricular Function in 3-D Echocardiography, IEEE Transactions on Medical Imaging, 21 (9): pp. 1059-68, September 2002.	<input type="checkbox"/>
	3	WAHLE et al., 3D Heart Vessel Reconstruction from Biplane Angiograms, IEEE Computer Graphics and Applications, 16(1): pp. 65-73, January 1996.	<input type="checkbox"/>
MB	4	HELMUT MAIR et al., Epicardial Lead Implantation Techniques for Biventricular Pacing via Left Lateral Mini-Thoracotomy, Video Assisted Thoracoscopy and Robotic Approach, The Heart Surgery Forum, 6(5): pp. 412-417, March 2003.	<input type="checkbox"/>

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		First Named Inventor		Burrell	
		Art Unit		3762	
		Examiner Name		NYA	
		Attorney Docket Number		144213 (GEM-0099)	

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> <i>i</i>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
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<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

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	Art Unit		3762
	Examiner Name		NYA
	Attorney Docket Number		144213 (GEM-0099)

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
MB	1	6246898		2001-06-12	Vesely, et al,	
	2	7047060		2006-05-16	Wu	
	3	4364397		1982-12-21	Citron, et al.	
	4	5765561		1998-06-16	Chen, et al.	
MB	5	6950689		2005-09-27	Willis, et al.	

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PTO-1449

**O I P E**  
**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**  
**LIST OF ITEMS**

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Attorney's Docket Number  
144213/GEM-0099Serial Number  
10/707,993Name of Applicant  
Burell et al.Filing Date  
1/30/2004Group Art Unit  
3762**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	NAME	Class	Subclass	Filing Date If Appropriate
MB	6208347	3/2001	Migdal	345	419	
	6246898	6/2001	Vesely	600	424	
MB	6504894	1/2003	Pan	378	8	

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Examiner Initial	Document Number	Date	NAME	Class	Subclass	Filing Date If Appropriate
MB	2003/0018251	1/2003	Solomon	600	427	
MB	2004/0027347	2/2004	Farsaie	345	419	

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	COUNTRY	Class	Subclass	TRANSLATION YES NO

**OTHER INFORMATION** (including author, title, date, pertinent)

Sra et al., "Registration of Three-Dimensional Left Atrial Computed Tomographic Images With Projection Images Obtained Using Fluoroscopy", Circulation 2005; 112: 3763-3768.

EXAMINER

*Mal Burell*

DATE CONSIDERED

*1-22-07*

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<b>FORM PTO 1449 (REV 2-32)</b>		<b>U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE</b>		<b>File No. 144216 / GEM-0099</b>	<b>Serial No. 10/707,993</b>
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		<b>Applicant(s): Burrell et al.</b>			
		<b>Filing Date: 01/30/2004</b>	<b>Group: 3762</b>		

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<i>MJS</i>	38	ACC/AHA/ESC Practise Guidelines; Eur. Heart J., Vol. 22, issue 20, October 2001; pages 1854 - 1923
<i> </i>	39	M. D. Leash, T. Trepelise, H. Omran, A. Bartorelli, P. Della Bella, T. Nakai, M. Reisman, D. fleschenberb, U. Krumsdorf, and D. Scherer; "Tiny Device Blocks 'Useless' Part of Heart, prevents blood clots;" Journal Report; American Heart Association; April 9, 2002
<i>MJS</i>	40	Ellen Barlow; "Operating in 3-D" found at <a href="http://www.med.harvard.edu/publications/HMAB/196fo3d.html">www.med.harvard.edu/publications/HMAB/196fo3d.html</a>
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PATENT AND TRADEMARK OFFICE**

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)**

<i>MB</i>	35	M. Haissaguerre, P. Jais, S. C. Shah, A. Takahashi, M. Hocini, G. Quiniou, S. Garrigue, A. Le Mouroux, P. Le Metayer, and J. Clementy; "Spontaneous Initiation of Atrial Fibrillation by Ectopic Beats Originating in the Pulmonary Veins;" The New England Journal of Medicine, Vol 339, No. 10, September 3, 1998; pp 659-668.
<i>J</i>	36	C. Pappone, S. Rosanio, G. Augello, G. Gallus, G. Vicedomini, P. Mazzzone, S. Gulletta, F. Gugliotta, A. Pappone, V. Santinelli, V. Tortoriello, S. Sala, A. Zangrillo, G. Crescenzi, S. Benussi, and O. Alfieri; "Mortality, Morbidity, and Quality of Life After Circumferential Pulmonary Vein Ablation for Atrial Fibrillation;" Journal of the American College of Cardiology, Vol. 42, No. 2; 2003; 185 - 197.
<i>MB</i>	37	J. Sra et al., "Current Problems in Cardiology- Atrial Fibrillation: Epidemiology, Mechanisms, and Management;" Current Problems in Cardiology, July 2000; pages 406 - 524

Examiner <i>Mark Burrell</i>	Date considered <i>1-22-07</i>
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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)**

<i>MB</i>	29	N. M. Alpert et al., "The Principal Axes Transformation - A Method for Image Registration;" <i>The Journal of Nuclear Medicine</i> ; 1990; 31:1717-1722.
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	31	G. T. Barnes et al.; "Conventional and Spiral Computed Tomography: Physical Principles and Image Quality Considerations;" <i>Computed Body Tomography</i> , 1998, Lippincott-Raven, Philadelphia, PA pp 1 - 20.
	32	Milan Sonka and J. Michael Fitzpatrick (eds); <i>Handbook of Medical Imaging Vol. 2. Medical Image Processing and Analysis</i> ; pp 129-174 & 447-506
	33	W. M. Feinberg et al.; "Prevalence, Age Distribution, and Gender of Patients with Atrial Fibrillation;" <i>Arch. Intern. Med.</i> Vol. 155; March 1995; pages 469-473
<i>MB</i>	34	J. L. Cox, J. P. Boineau, R. B. Schuessler, T. B. Ferguson, Jr., M. E. Cain, B. D. Lindsay, P. B. Corr, K. M. Kater, D. G. Lappas; "Operations for Atrial Fibrillation;" <i>Electrophysiology, Pacing and Arrhythmia, Clin. Cardiol.</i> 14, 1991; pages 827-834

<b>Examiner</b> <i>Mal Burrell</i>	<b>Date considered</b> <i>1-22-07</i>
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<i>MB</i>	23	L. Thurfell et al.; "Registration of Neuroimaging Data: Implementation and Clinical Applications;" <i>American Society of Neuroimaging</i> ; 2000; 10:39-46
<i>MB</i>	24	S. A. Ben-Haim et al.; "Nonfluoroscopic, <i>in vivo</i> navigation and mapping technology;" <i>Nature Medicine</i> ; 1996, 2:1393-5.
<i>MB</i>	25	B. Taccardi et al.; "A new intracardiac probe for detecting the site of origin of ectopic ventricular beats during one cardiac cycle;" <i>Circulation</i> ; 1987; 75:272-81
<i>MB</i>	26	F. H.M. Wittkampf et al.; "New Technique for Real-Time 3-Dimensional Localization of Regular Intracardiac Electrodes;" <i>Circulation</i> ; 1999; 99:1312-17.
<i>MB</i>	27	V. Fuster et al. "ACC/AHA/NASPE 2002 Guidelines Update for Implantation of Pacemakers and Antiarrhythmia Devices;" <i>J. Am. Coll. Cardiol</i> 2001; 38:1-47.
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MB	17	M. V. Pitzalis et al., "Cardiac Resynchronization Therapy Tailored by Echocardiographic Evaluation of Ventricular Asynchrony;" <i>J. Am. Coll. Cardiol.</i> 2002; 40:1615-22.
	18	W. T. Abraham et al., "Cardiac Resynchronization in Chronic Heart Failure;" <i>N. Engl. J. Med.</i> 2002; 346:1845-1853
	19	C. A. Pelizzari et al., "Accurate Three-Dimensional Registration of CT, PET, and/or MR Images of the Brain;" <i>J. Comput. Assist. Tomogr.</i> 1989; 13:20-26
	20	A.C. Evans et al.; "MRI-PET Correlation in Three Dimensions Using a Volume-of-Interest (VOI) Atlas;" <i>J. Cereb Flow Metab.</i> 1991; 11:A69-A78.
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<b>FORM PTO 1449 (REV 2-32)</b>		<b>U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE</b>	File No. 144216 / GEM-0099	Serial No. 10/707,993
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		Applicant(s): Burrell et al.		
		Filing Date: 01/30/2004	Group: 3762	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
MB	25 6,421,412 B1	07/16/2002	Hsieh et al.	378	9	08/23/1999
	26 6,456,867 B2	09/24/2002	Reisfeld	600	407	02/21/2001
	27 6,490,475 B1	12/03/2002	Seeley et al.	600	426	04/28/2000
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)**

MB	13	Z. Zhang, "Iterative Point Matching for Registration of Free-Form Curves," <i>Inria</i> 1992, pages 1 - 40.
	14	C.L. Grines et al.; "Functional Abnormalities in Isolated Left Bundle Branch Block: The Effect of Interventricular Asynchrony," <i>Circulation</i> ; 1989; 79:845-53.
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Examiner	<i>Mal Buehl</i>	Date considered
		<i>1-22-07</i>

EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>FORM PTO 1449 (REV 2-32)</b>		<b>U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE</b>	File No. <b>144216 / GEM-0099</b>	Serial No. <b>10/707,993</b>
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		Applicant(s): <b>Burrell et al.</b>		
		Filing Date: <b>01/30/2004</b>	Group: <b>3762</b>	

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
MB	17 6,256,368 B1	07/03/2001	Hsieh et al.	378	8	10/15/1999
	18 6,266,553 B1	07/24/2001	Fluhrer et al.	600	428	09/11/1998
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

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/	11	J. Sra et al., "Cardiac Chamber Geometry Construction, Catheter Navigation and Ablation Using Cutaneous Patches;" <i>Supplement to Circulation</i> 2003 Oct., 108 (17): IV-585, Abstract 2667.
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				Applicant(s): Burrell et al.	
				Filing Date: 01/30/2004	Group: 3762

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
MB	9	5,839,440	11/24/1998	Liou et al.	128	654	06/17/1994
	10	5,951,475	09/14/1999	Gueziec et al.	600	425	09/25/1997
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)**

MB	5	R.J. Schilling et al.; "Simultaneous Endocardial Mapping in the Human Left Ventricle Using a Noncontact Catheter: Comparison of Contact and Reconstructed Electrograms During Sinus Rhythm;" <i>Circulation</i> 1998; 98:997-98.
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	7	J. Sra et al., "Noncontact Mapping for Radiofrequency Ablation of Complex Cardiac Arrhythmias;" <i>J. Interven. Cardiac Electrophysiol</i> 2001; 5:323-331.
MB	8	N. M.S. de Groot et al., "Three-Dimensional Catheter Positioning During Radiofrequency Ablation in Patients: First Application of a Real-Time Position Management System;" <i>J. Interven. Cardiac Electrophysiol</i> 2001; Nov. 11(11):1183-92

Examiner	Mal Burrell	Date considered
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**FORM PTO 1449**  
(REV 2-32)

**U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE**

File No.  
144216 / GEM-0099

Serial No.  
10/707,993

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3762

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MBS	1 3,954,098	05/04/1976	Dick et al.	128	2.05 Z	01/31/1975
	2 4,574,807	03/11/1986	Hewson et al.	128	419 PG	03/02/1984
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	4 5,274,551	12/28/1993	Corby, Jr.	364	413.13	11/29/1991
	5 5,348,020	09/20/1994	Huston	128	696	12/15/1992
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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Examiner	<i>Mah Babbil</i>	Date considered	<i>1-22-07</i>
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# ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

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Title of Invention	METHOD, APPARATUS AND PRODUCT FOR ACQUIRING CARDIAC IMAGES
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Application Number :

Confirmation Number:

First Named Applicant: Marc Burrell

Attorney Docket Number: 144213

Art Unit:

Examiner:

Search string: ( 5431688 or 5304212 ).pn

## US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
MD	1	5431688	1995-07-11	Freeman		607	10
MB	2	5304212	1994-04-19	Czeisler et al.		607	88

## Signature

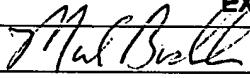
Examiner Name: <i>Marc Burrell</i>	Date
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>( Not for submission under 37 CFR 1.99)</i>	Application Number	10707993
	Filing Date	2004-01-30
	First Named Inventor	Marc Anthony Burrell
	Art Unit	3766
	Examiner Name	Bockelman, Mark
	Attorney Docket Number	144213/GEM-0099

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
MB	1	GENEVIEVE DERUMEAUX et al., Doppler Tissue Imaging Quantitates Regional Wall Motion During Myocardial Ischemia and Reperfusion, Circulation Journal of the American Heart Association, Circulation 1998; 97; 1970-1977	<input type="checkbox"/>
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	3	WAHLE et al., 3D Heart Vessel Reconstruction from Biplane Angiograms, IEEE Computer Graphics and Applications, 16(1): pp. 65-73, January 1996.	<input type="checkbox"/>
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	Filing Date		2004-01-30
	First Named Inventor		Marc Anthony Burrell
	Art Unit		3766
	Examiner Name		Bockelman, Mark
	Attorney Docket Number		144213/GEM-0099

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